

CHAPTER 5

EMERGENCIES AND DAMAGE CONTROL

We must benefit from the mistakes of others...
we cannot hope to make them all ourselves.
Von Karmen

5-1 INTRODUCTION.

A ship that goes to sea is traveling into harms way. While we train how to use our vessel in a safe manner to accomplish the mission and through good, thorough planning achieve success, there will come a time that even though not intended, events will occur that put us in extremis. In an emergency, a good team with sound judgement, logical thinking, determined effort, and a good plan, can minimize problems and prevent total disaster. The procedures contained in this chapter are the result of knowledge gained from situations that have occurred and the methods determined to best deal with them.

5-2 CREW OVERBOARD.

The most devastating experience a sailor can have is to fall overboard and from the vantage point of 10" above the water, watch his boat sail away.

5-2.1 PREVENTION

Prevention is the best solution to the crew overboard problem. In the event that a person does become separated from the boat, every effort must be made to get the victim back aboard in the absolute minimum amount of time.

5-2.1.1 SAFETY HARNESES

Safety harnesses are the best preventive equipment available, however to be effective, they must be worn. Safety harnesses should be worn:

- Sunset to sunrise, before exiting the cabin into the cockpit.
- During inclement weather
- At the discretion of the OIC/skipper.

5-2.2 PREPARATION

At the beginning of each watch, do the following:

- Check all crew overboard gear and halyards to ensure that they are ready for immediate use.
- Brief the watch section on the particular details of the crew overboard recovery procedures that will be used, considering current conditions of wind, seas, and sails. A Personal Flotation Device, (PFD) shall be stored within easy reach of the helmsman to be thrown to the victim.
- A swimmer and backup shall be designated. Should crew be swept or fall overboard, particularly in heavy seas, quick action is necessary to accomplish a safe rescue. Accomplish the following procedures:

5-2.3 OSCAR.

A man-overboard is referred to as OSCAR, because of the flag atop the crew overboard pole. For whatever reason, a crew member that is now OSCAR has an awesome responsibility.

1. Make your situation known. Holler, scream, shout, and use your whistle so the crew can be alerted to the fact that you are overboard.
2. Try not to make a face down entry into the water in order to minimize shock to your body.
3. Make yourself a better target. Regardless of how tall a person is, being overboard is a common denominator. Only your head will be visible!
 - If you are not incapacitated, wave an arm over your head.
 - Use your whistle.

- At night, use the firefly light, (strobe light), on your techvest.
 - As soon as the crew knows you are in the water they will start throwing floatable objects in the water. Try to make your way to them, particularly the man overboard pole. The flag is 12' above the water and is a better target. Put yourself next to this visible target.
4. Improve your flotation. Trying to stay afloat is tiresome.
 - If you're wearing a life jacket, make sure it is tied on.
 - Gather floatable objects to you to help support your weight, and to mark your position.
 5. Do not panic.
 6. Conserve your energy. Particularly in cold water.

5-2.3.1 PERSON SIGHTING OSCAR.

The person sighting OSCAR is the most valuable link with the overboard crew member..

1. The person sighting the man overboard should instantly shout
"MAN OVERBOARD!"
[] {direction to OSCAR}
[] {distance from the boat}
"ALL HANDS ON DECK!"
2. Maintain sight of OSCAR. This is your primary function.
3. Relinquish what ever duty you were performing...even steering the boat.
4. Point to OSCAR to help draw other eyes onto OSCAR and to help you keep sight of OSCAR.
5. Move throughout the boat to maintain sight of OSCAR. .
6. Keep the victim in sight! This is the most important task. In rough seas, it may be impossible to see beyond the next wave. Assign a crew member this responsibility.

5-2.3.2 CREW ACTIVITY.

1. Second person on deck should man the wheel if it was given up by the person having sight of OSCAR.
2. Deploy the man-overboard pole and equipment, Throw a life ring or other buoyant device to the victim, even if the victim is an excellent swimmer. These items can aid in maintaining visual

contact with the person in the water.

3. NAVIGATOR. Punch the MOB button on the Loran and GPS. Get a GPS, LORAN, and visual position as soon as possible.
4. HELM.
 - Keep the boat under control.
 - Use the "Quickstop" method to stop the boat as close to the victim as possible. "Heave to", by tacking the boat. Do not cast off the jib. The back winded jib will help slow the boat.
 - Starting the engine can assist in maneuvering the boat. Weigh the need for power against the possibility of catching the victim in the screw or fouling the screw with lines over the side. Conditions will determine whether to recover under sail or power.
 - Maneuver to return the boat to the victim. At night, in fog, or in choppy seas, an OSCAR may drift out of sight. Sail the boat up the path of buoyant gear tossed in the water.
 - Turn the boat downwind. Foredeck and mast lower headsail and secure it on deck.
 - Call "Gybing". Mainsheet works to centerline the main.
 - Call "Gybe Ho!", complete the gybe and sail the boat back upwind toward OSCAR.
5. Recovery team must establish contact with OSCAR. Use a throw rope, life sling, or horseshoe buoy. Recover OSCAR safely. The following are various methods of recovery: Use manpower. Use a halyard (spinnaker or jib). Use a sail. Use the boom itself. Use a sheet as a perch for OSCAR to stand on and winch OSCAR aboard.
6. It may be necessary to put a swimmer in the water to recover an incapacitated victim. The rescue swimmer should wear a safety harness, with a line attached to the tether line of the harness and tied to the boat before going in the water. Use the MOB life sling as a retrieving device, (follow the instructions printed on the container. Consider using a halyard, spinnaker pole, topping lift, block and tackle as means for recovery.

7. Recover the swimmer on board.

5-2.4 CREW OVERBOARD RECOVERY, SPINNAKER

Safety Considerations:

- Ensure lines are aboard before putting engine in gear.
- Tether the swimmer before entering the water.

Required Positions:

HELM
POINTER
MAINSHEET
MAST
FOREDECK
SPINNAKER GUY
SPINNAKER SHEET
SWIMMER
NAVIGATOR
RECOVERY TEAM

Sequence of Events:

1. Person having sight of OSCAR call out "MAN OVERBOARD".
2. HELM "Heave to".
3. SPINNAKER GUY ease the pole to the head stay, cleat the guy, stand by topping lift.
4. SPINNAKER SHEET prepares to ease the sheet to douse the spinnaker.
5. FOREDECK and MAST douse the spinnaker, HELM brings boat head to wind.
6. HELM maintains boat in "hove to" condition and starts engine.
7. SPINNAKER GUY AND FOREDECK lower pole to the deck.
8. SWIMMER prepares to enter the water.
9. HELM approaches OSCAR to put the boat to leeward of OSCAR and 45-60 degrees off the wind.
10. RECOVERY TEAM prepares to take oscar on board.
11. RECOVERY TEAM establishes contact with OSCAR and takes OSCAR on board.

5-3 DAMAGE CONTROL.

The three basic objectives of damage control are PREVENT, CONTAIN, REPAIR.

5-3.1 PREVENT.

Prior planning prevents poor performance.

Take practical preliminary measures to prevent damage before danger occurs. Remove fire hazards, maintain damage control equipment in a ready condition for easy access and employment. Train the crew to work as a team. Knowledge of first-aid and damage control is vital.

5-3.2 CONTAIN.

Once a mishap has occurred, contain the damage to keep it from getting worse. Minimize and localize damage by controlling flooding, maintaining stability, combating fires and administering first-aid.

5-3.3 REPAIR.

Finally when the damage has been contained, repair the boat to achieve as good a situation as possible so as to be able to continue and get the vessel home, and out of harms way.

5-4 DAMAGE CONTROL EQUIPMENT.

Each NAVY 44 is provided with a Damage Control (D.C.) Kit and sufficient tools, supplies and equipment for use in emergency situations. The D.C. Kit is stowed in the forward starboard compartment in a heavy canvas bag. (See Table 5-1 Damage Control Kit for contents).

5-5 HULL DAMAGE AND EMERGENCY REPAIRS.

Should the water integrity of the hull be damaged, the first action is to stop the flow of water entering the boat.

1. Stop the boat to reduce ram pressure.
2. Heel the boat or tack in order to raise the damaged portion out of the water or as high as possible to reduce the pressure of the water coming in.
3. Heave To.
4. Plug any holes in the hull Immediately. Small holes may be plugged temporarily by stuffing them with cotton duck, rags or wooden plugs. Larger holes may be temporarily plugged with stuffing material such as life jackets, seat cushions, sleeping bags, sails and wedges. Stuffing material used to plug holes should be sufficiently braced or shored to prevent loosening or slipping away due to motions of the boat at sea.
5. Patch from outside in. Since the

pressure of the water is trying to force its way into the boat, it will expel what we try to stuff into the hole. Once the flow of water has been contained, and minimized thought should be given to putting a crash blanket over the hole from the outside. Water pressure will work in favor and try to force the patch into the hole.

5-6 ALARMS.

There are four alarm on the boat listed in order of severity. Determine which alarm is sounding and proceed with emergency procedures as listed below:

- **HIGH WATER BILGE ALARM.** A 6" classroom bell under the NAV desk indicating a possible flooding problem.
- **ENGINE HIGH TEMPERATURE ALARM.** A buzzer behind the throttle panel in the cockpit indicating a possible engine cooling system problem. Electric energy for this alarm come through the ENGINE ALARM circuit breaker at the switchboard panel.
- **ENGINE LOW OIL PRESSURE ALARM.** A constant squeal indicating a possible engine oil starvation problem. Electric energy for this alarm come through the ENGINE ALARM circuit breaker at the switchboard panel.
- **RACOR ALARM.** A constant tone indicating a water contamination problem in the fuel.

5-6.1 FLOODING and the HIGH WATER BILGE ALARM.

Probably the first indication of flooding will be the ALARM BELL. On a tack, bilge water may be spilling onto the cabin sole. Inspect the bilge for high water.

1. Lift the floor board next to the galley sink and check the water level. The high water float is located on the front face of the bilge cavity about halfway up. Water should be up to that level to trigger the bell.
2. **TURN OFF** the BILGE ALARM circuit breaker at the ELECTRICAL SWITCHBOARD PANEL.
3. Turn **ON** the electric BILGE PUMP, (center column, third circuit breaker down from the top).

4. Man the manual bilge pump in the cabin. Pump handle is on the right front face of the foul weather gear lockers behind the nav station .
5. Man the manual bilge pump in the cockpit. Pump handle is located in the line locker, port side in the cockpit, inboard and forward.
6. Check for other sources of water entering the boat. Refer to the Thru Hull diagram, and Thru Hull Table, **LAST TWO PAGES** in CHAPTER 1. If a broken or defective thru hull is found use the Damage Control PLUG,(DC plug), tied in the vicinity of each thru hull and drive it into the hole to try to stem the flow.
7. Check for water flow from the following sources:
 - Galley faucets open.
 - Head overflowing.
 - Fresh water or Salt water faucets in the head open.
 - 70 gal Water tank selector valves open. Close valves. Check hoses of the tanks for integrity
8. Check for water flow entering the boat from unusual locations. The hull may have been holed.
9. If a hole in the hull is located, stuff anything into the hole that will stop the flow. Life jackets, pillows, blankets et al.
10. A "CRASH PAD" from the damage control kit can be lowered outside the hull over the hole to stop the flow. Lower the "crash pad" well below the hole until in the proper position before attempting to bring it snug to the hull since the natural pressure of the water will try to pull it in toward the hole. Tie it into place with the lines provided.
11. **HELM.**
 - Put the boat on a point of sail to get the damaged area as high out of the water as possible. Water pressure increases at an alarming rate for each foot of depth.
 - Slow the speed of the boat to reduce the ram pressure caused by the boats way. Consider "Heaving to".

12. NAVIGATOR.

- Get a fix. Prepare a "Pan-Pan" or "MAYDAY" report to be transmitted on command of the skipper.

5-6.2 ENGINE HIGH TEMPERATURE ALARM.

1. The most probable causes are:
 - loss of raw water cooling.
 - loss of captive engine cooling.
2. Loss of raw water cooling. Check for raw water discharge over the transom. If no discharge, the most probable causes are:
 - a closed inlet seacock.
 - a clogged raw water strainer.
 - a defective water pump impeller.
3. Turn OFF the ENGINE ALARM Circuit breaker, (right column, 3rd from the bottom) at the switchboard panel.
4. Check the Engine water temperature gauge at the ENGINE INSTRUMENT PANEL for temperature over 180 degrees F. Secure the engine by PULLING UP on the ENGINE SHUTDOWN T-HANDLE.
4. Check that the raw water inlet seacock behind the engine is OPEN.
5. Inspect the raw water strainer. If contaminated, close the raw water inlet seacock. Open the strainer, remove the basket, clean and replace it. Open the raw water seacock.
6. Open engine compartment access. Check for water in the engine bilge. TASTE the WATER.
7. If the water tastes "salty", a leak in the raw water cooling system is possible. Check the inlet seacock, check hoses in this system for integrity, and tighten clamps. Restart the engine and see if water discharges over the transom.
8. If there is still no discharge over the transom, the water pump impeller could be defective. See Chapter 4 section 4-2.3.1.3 Replace raw water pump impeller.
9. If the water is NOT salty, a loss of anti freeze/water fluids is possible:

WARNING

OPENING THE CAPTIVE COOLANT TANK WHEN THE ENGINE IS HOT CAN RESULT IN SEVERE BURNS TO THE OPERATOR.

- Place a rag over the Fresh water filler cap.
 - Use the "HOT MITT" from the galley.
 - SLOWLY, crack the filler cap to allow steam to escape.
10. LOOK to see that there is coolant visible in the top of the tank.
 - If there is, close filler cap go to step 11. If there is not the most probable cause is a loss of coolant.
- A leak in the captive cooling, (anti freeze) system.
11. Check hoses and tighten clamps in this system. If integrity check is ok, suspect the water pump impeller. Disassemble and inspect the impeller. If defective, replace impeller.
 12. Check fluid level in the overflow tank located on the cross member of the engine compartment.
 13. Fill a quart size container with 50/50 fresh water/prestone mixture, (fresh water only if prestone is not available), FILL captive coolant tank with fresh water. REPLACE FILLER CAP.
 14. TURN ON the ENGINE ALARM circuit breaker at the ELECTRICAL SWITCHBOARD PANEL.
 15. RESTART engine.
 16. CLOSE Engine Compartment.

5-6.3 ENGINE LOW OIL PRESSURE.

1. Check oil pressure on the oil pressure gauge on the Engine Instrument Panel. The alarm will sound when the threshold pressure of 15 psi is not achieved.
2. Ensure that oil filler cap is in place.
3. Ensure that oil dip stick is in place.
 - If there is oil in the bilge proceed with this procedure.
 - If there is no oil present in the bilge go to step 6.
3. CLEAN OIL from bilge.

4. INSPECT oil drain hose clamp is tight, and/or ruptured hose. Tighten clamp and/or replace hose.
5. INSPECT oil filter for signs of leakage. Tighten if loose.
6. Check dip stick for oil quantity. Prepare sufficient oil to bring level back to the "Full" mark.
7. Open oil filler cap.
8. Put engine oil in the engine.
9. Recheck oil level on the dip stick. ADD oil until dip stick shows "FULL".
10. REPLACE OIL FILLER CAP.
11. TURN ON the ENGINE ALARM circuit breaker at the ELECTRICAL SWITCHBOARD PANEL.
12. RESTART ENGINE.
13. CLOSE ENGINE COMPARTMENT.

5-6.4 RACOR ALARM

The alarm will sound when there is water contamination in the fuel at the RACOR filter.

1. Inspect sediment bowl for the presence of water/foreign particles. If present, get a small container in which to collect drain sample from the RACOR. Open pet cock on the bottom of the sediment bowl and push IN on the petcock to drain water/contaminant out of sediment bowl.
2. Close the pet cock.
3. Use the black pump button on the top of the RACOR FILTER. Pump to refill the RACOR.
4. Use the wobble pump to regain low fuel pressure to the engine.
5. Go through restart procedures to start the engine.

5-7 FIRE ON BOARD.

A fire can occur anywhere in the boat, but the most likely places are the engine, and the galley. Communicate! The person discovering the fire should get the word out.

1. Engine Fire.

When a fire is detected by the sensor on the Fireboy Model 15CG Halon system in the engine compartment, the indicator light located on the electrical switchboard panel will go out indicating Halon is being released in the engine compartment.

- shutdown the engine

immediately.

- Do not open the engine compartment since this will introduce oxygen to the area and support combustion.
- Get a fire extinguisher ready in case the fire jumps the confines of the engine compartment.
- Shut off the fuel at the fuel tank.

2. Galley Fire.

- Shut off the propane at the switchboard panel, and at the bottle in the propane locker in the cockpit.

5-7.1 FIRE FIGHTING.

A general fire fighting plan should be established by the crew for combating fires. Crew members should be assigned to specific tasks so that fire fighting is expedited without confusion. Fires are divided into different classes depending on the type of combustible material.

CLASS "A" - wood, paper, cloth, etc.

CLASS "B" - combustible liquids, fuels, oils, etc.

CLASS "C" - electrical

NOTE

CO2 is the primary combative agent to use for an electrical fire.

CAUTION

When fighting a Class "C" fire, the power source must be secured immediately.

5-7.1.1 ELECTRICAL FIRE.

1. Sniff test the air. Fumes will give an indication of the class of fire.
2. Secure all non-essential electrical equipment.
3. Check out the fire from the edges. In the absence of positive indicators, treat as a Class A/B fire.
4. Once the fire is out, selectively turn on electrical equipment until the faulty circuit is identified. Keep this circuit OFF.
5. Ventilate the boat.
6. Account for all the crew.

5-7.2 HALON EXTINGUISHING SYSTEM.

The Halon system is the primary means of extinguishing engine compartment fires. The Halon system can also be used to extinguish Class "B" and "C" fires. When the Halon extinguisher detects a fire and automatically discharges in the engine compartment, the indicator light at the switchboard will go out. Accomplish the following:

CAUTION

The engine must be shut down for the Halon system to be effective.

1. Shut down the engine immediately with the ENGINE SHUTDOWN T-handle. Do not open the engine compartment access panels.
2. Cutoff the engine electrical systems at the D.C. SWITCHBOARD PANEL.
3. Wait until the Halon cylinder has completely discharged in the engine compartment. Carefully observe the engine compartment through one of the removable panels to ensure that the fire is extinguished.

WARNING

OPENING THE ENGINE COMPARTMENT BEFORE THE FIRE IS COMPLETELY OUT WILL INTRODUCE OXYGEN AND MAY CAUSE A RE-FLASH. HAVE A FIRE EXTINGUISHER READY WHEN OPENING THE ENGINE COMPARTMENT.

4. Get crew not engaged in fighting the fire out of the cabin to minimize the possibility of asphyxiation when the engine compartment is opened.
5. Ventilate the engine compartment for 10 minutes.
6. After the Halon system has discharged in the engine compartment and the incident reported, the Halon extinguisher should be replaced or recharged and the indicator light tested to ensure proper operation.

5-7.3 DRY CHEMICAL FIRE EXTINGUISHERS.

Use these procedures when using the three (3) dry chemical fire extinguishes.

1. Keep extinguisher in upright position.
2. Pull ring pin.
3. Push on lever.
4. Squeeze nozzle.
5. Direct discharge at base of flames with side to side motion.

5-7.4 CO2 FIRE EXTINGUISHER.

WARNING

CO2 SNOW WILL BLISTER THE SKIN AND CAUSE PAINFUL BURNS IF ALLOWED TO REMAIN ON THE SKIN. DO NOT ALLOW THE HORN TO TOUCH ENERGIZED ELECTRICAL EQUIPMENT WHILE FIGHTING AN ELECTRICAL FIRE. AN ELECTRICAL SHOCK CAN BE TRANSMITTED TO THE FIRE FIGHTER.

CAUTION

AVOID SPRAYING A HOT ENGINE WITH CO2.

The 5-pound CO2 fire extinguisher has a squeeze grip type release valve.

1. Carry the extinguisher in upright position, and approach the fire as closely as heat permits.
2. Remove the locking pin from the valve.

WARNING

DO NOT GRASP THE HORN WHILE DISCHARGING CO2.

3. Grasp the handle and aim in direction of the fire.
4. Squeeze the release lever. The maximum range is five feet from the end of the horn.
5. Direct the discharge at the base of the fire.
6. Release the lever to close the valve as soon as conditions permit and continue to open and close it as necessary.
7. When fighting fire in electrical equipment or on a bulkhead, direct the discharge of the carbon dioxide at the bottom of the flame area. Sweep the horn slowly

from side to side and follow the flames upward as they recede.

8. When continuous operation is desired or when the valve is to remain open for discharge, slip the D-yoke ring on the carrying handle over the operating handle when the latter is depressed.

5-7.5 GALLEY FIRE.

The galley stove presents a potential fire hazard. Propane is heavier than air, settles to the bilge, and has a distinctive odor. Secure the source of fuel.

1. Turn off the propane switch at the switchboard panel and over the reefer..
2. Shut off gas knob in the propane locker.
3. Shut off burners and oven controls.
4. Put out the fire.
5. Clean up and account for crew.

5-8. EMERGENCY STEERING.

When the boat fails to respond to the wheel, balance the sails to keep the boat on a steady heading. This will facilitate the procedures to diagnose the problem.

5-8.1 WHEEL WILL NOT TURN.

Check for foreign object jamming the steering equipment.

1. Inspect the steering quadrant in the steerage compartment aft of the engine for jamming.
2. If a jam cannot be found, it may be necessary to remove the steering cable from the quadrant.

5-8.2 BOAT DOES NOT RESPOND TO WHEEL.

If the steering cable comes loose from the quadrant, or if the cable breaks, the wheel will spin freely with no apparent effect.

1. Control the boat under sail.
2. Remove the rudder cap and install the emergency tiller.
3. Control the boat.
4. Inspect quadrant and reinstall cable.
5. If cable has broken, the boat will have to continue to be sailed with the emergency tiller.

5-8.2.1 SETTING UP THE EMERGENCY TILLER.

1. Remove the hub nut of the wheel. This should give enough room for the emergency tiller to swing clear of the wheel.
2. Remove cover over the rudder stock.
3. Remove the emergency tiller from its stowage position in the port aft cockpit locker and install on the rudder stock.
4. Ensure that the tiller is fully seated on rudder post and that the retaining bolt and washer are secured.
5. Steer with the emergency tiller. Lines led to winches may be required.

NOTE

Block and tackle may be used.

6. Weigh the merits of releasing/cutting the wire rope leading to the radial drive. Do this only if the cable is jamming the movement of the rudder.

5-8.3 RUDDER JAM.

If the rudder is jammed and cannot be turned, rig an emergency rudder.

1. Use the spinnaker pole as an emergency steering oar.
2. Lash a floor board or a locker door to the end of the spinnaker pole.
3. Attach a safety line to the inboard end of the pole and deploy it out the stern pulpit.
4. Lash the pole so the make shift rudder can reach the water, yet has enough motion to be able to steer.

5-9 LOSS OF ALL ELECTRICAL POWER.

1. Check the Rotary Battery Switches for the engine bank and for the house banks to ensure they have not been inadvertently shut off. If they are off, turn them on.
2. Cut off power at the main breaker on the SWITCHBOARD PANEL.
3. Check the batteries for proper storage, charge, connections, and a proper grounding. Clean terminals as needed.
4. Cut off power at each individual circuit breaker on the switchboard panel. Selectively, turn on individual circuit breakers until the circuit causing the

electrical problem is located. Cut off power to that circuit.

5. Investigate why the system is malfunctioning.

5-10 DISMASTING PROCEDURES.

Expeditious action will minimize the danger and ensure the safety of the boat and crew.

1. Account for all crew members.

WARNING

SHROUDS AND LINES CAN BECOME ENTANGLED ON THE PROPELLER OR RUDDER. IF YOU CONSIDER PUTTING A CREW MEMBER IN THE WATER, SECURE A LINE TO THE CREW MEMBER AND TIE IT TO THE BOAT BEFORE ENTERING THE WATER.

2. Do not turn on the engine. Shrouds, halyards, and sails can foul the prop.
3. Control and lash the broken section of the mast on deck to prevent it from punching a hole in the boat. If the mast cannot be controlled, get rid of the mast by pulling the cotter pins and drift out the clevis pins, unfasten turnbuckles or cut off the shrouds with a hacksaw.
5. If the mast does not break cleanly, saw or shear off the mast at the stump.
6. Salvage as many sheets, halyards, sails and gear as possible for jury rigging.
7. In moderate seas, the mast can be lashed on deck. Pull all sails on board to prevent them from weighing down the mast. Pull the mast on board and lash it tightly to the lifeline stanchions.
8. Once the mast has been controlled, or cast off, then consider use of the engine. Jury rig a mast and sails. Consider using the broken mast section if available. Use the Spinnaker pole. This will conserve fuel supply if safety is a long distance away.

5-11 ABANDON SHIP.

Abandoning the vessel is a last ditch maneuver. Most emergencies that result in having to abandon the vessel have provided time to organize and plan for the event. You should not go until you "Step up into the raft".

1. Transmit a "MAYDAY" call on VHF Channel 16 and HF 2182.0 kHz, the

International Distress Channel and Frequency.

"MAYDAY, MAYDAY, MAYDAY"

"This is" Name of vessel and call sign (3 times)

"My position is..."

Nature of distress

"I have _____ (number) of persons on board"

"My intentions are..."

Assistance desired, "OVER".

2. Gather as many vital life support items, such as food and water, flares, EPIRB, handheld radios as possible.
3. Assemble your "GRAB BAG". These items should be stowed so that they are readily available in the event of having to abandon ship.
4. Shoot off two Visual distress signals in immediate succession to maximize the duration of the signal. Then wait. Conserve the remaining flares to use when potential rescue vessels come into view. If the emergency continues, repeat this process in 4 hours.
5. Take the EPIRB from its holder and turn it on. The EPIRB will broadcast a continuous distress signal on 406Mhz. Take the EPIRB into the life raft. Transmit continuously so that your position can be established for rescue agencies. Do not turn the EPIRB off!
6. Assemble "Grab Bag" of essential items.
7. Launch the life raft on the leeward side, keeping it clear of flares and smoke.
8. Board the life raft from the leeward side of the raft with the EPIRB and "Grab Bag". Have a knife at hand to free the life raft once all personnel are on board. A knife is provided in the raft.
9. The boat is your best visual distress signal and aid to survivability. Leave the boat only when it is certain that she is going down. Then leave the vicinity of the boat only when it is apparent that rescue is not imminent.

End of Chapter 5.